

## REMARKS

1. Rejection of claims 1, 2, 5-10 and 18 under 35 U.S.C. § 103(a), as being unpatentable over Brownawell et al (U.S. Patent No. 5,069,799; hereinafter "Brownawell '799").

Claims 1, 2, 5-10, 13-15, 17, and 18 have been finally rejected as obvious over Brownawell '799, with claims 1, 7, 13, and 18 being independent.

The basis of the PTO's rejection is as follows:

Brownawell '799 discloses an oil filter comprising a hollow housing having an inlet and an outlet, a mechanically active filter member (i.e., inactive filter media 12) disposed inside the housing, and a chemically active filter member (i.e., 14) disposed inside this housing. This reference further discloses an embodiment having a supplemental cartridge with a chemically active filter member (i.e., 30) disposed therein. The chemically active filter member includes a plurality of particles (see col. 2, line 6) containing a beneficial additive such as a basic salt of the type recited (see col. 2, lines 12-17). Accordingly, this reference discloses the claimed invention with the exception of the diameter of the particles in the chemically active filter member (claims 1, 2, 5-10, 13-15, 17), and the percentage of the additive in these particles (claim 18). However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ particles having the recited diameter in the reference system, in order to facilitate handling of the treatment material in this reference system. Also, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the recited amount of beneficial additive in the reference particles, in order to ensure that a sufficient amount of additive is present in these particles to adequately rejuvenate the oil undergoing treatment.

(Office Action of 8/25/2006, page 2 and 3)

Applicants greatly appreciate the detailed basis of rejection but must respectfully disagree and traverse the rejection.

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to

combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. MPEP 2143.

This standard has not been met in the instant case, particularly with respect to independent claims 1, 7, 13, and 18 and dependent claim 17.

The prior art does not teach or suggest all claim limitations. The PTO has admitted that Brownawell '799 fails to disclose a required element of claim 1, i.e., that Brownawell '799 is silent as to a chemically active filter element containing particles of a beneficial additive having Applicants' required average diameter.

Brownawell '799 discloses a filter system that requires both an active filter media and an inactive filter media. The active filter media can be a combination of a chemically active filter media and a physically active filter media. (*See Brownawell '799, col. 1, lines 52-55*). Although Brownawell teaches that chemically active filter media may contain a strong base, hydroperoxide decomposers, or media containing a dispersant functional group, Brownawell is silent as to the use of antioxidants or any necessary concentrations or amounts of such chemically active filter media.

In contrast, Applicants' invention of independent claim 1 requires "...a plurality of particles having interstitial spaces therebetween, said particles having an average diameter of from 0.1 to 6 millimeters and being retained in said oil filter, the particles comprising a beneficial additive to be released into engine oil as said engine oil circulates through the interstitial spaces." Independent 13 requires a chemically active filter member that contains particles of a particular average diameter that contain a beneficial additive consisting essentially of at least one of an antioxidant, a basic salt, or a mixture of a basic salt and an antioxidant. It is also noted that claim 17 depends from claim 1 and requires that the beneficial additive comprise a particularly selected antioxidant.

Independent claim 7 also requires particular structural elements not disclosed in Brownawell '799.

Independent claim 18 requires particles that comprise from 90 to 97% by weight of a beneficial additive comprising at least one of an antioxidant, an anti-wear agent, a basic salt, or a mixture thereof

The cited reference fails to provide a prima facie case of obviousness as to any of these claimed inventions. It is noted that for the purposes of appeal, independent claims 1, 7, 13, and 18 and dependent claim 17 will **not** stand and fall together. Accordingly, Applicants and the Undersigned respectfully request that the PTO respond to each of the individual arguments set forth below as to these claims.

Brownawell's sole discussion of the shape or size of any particles comprising a 'beneficial additive' in the '799 chemically active filter media is limited to the use of ZnO 'pellets' in Example 2. Although the Brownawell '799 states that substrate supports for the chemically active media may be in the form of pellets, this discussion says nothing about the shape or size of any particles comprising a beneficial additive.

As described in Applicants' Specification, the specific particle size range of .1 to 6 millimeters is particularly chosen to provide particularly sized interstitial spaces. Applicants' Specification expressly states:

The particles are preferably made with a diameter in a range of 0.1 to 6 millimeters, preferably in a range of 0.25 to 5 millimeters in order to control the interstitial spaces therebetween in the filter matrix. The size of these interstices is specifically chosen and engineered to screen out most complexes which result from a reaction between combustion acids in the filtered oil and the beneficial additive of the particles, without substantially reducing the flow rate through the chemically active filter member 16.

(Applicants Specification, paragraph 39.)

Brownawell '799 fails to recognize the problem being solved by Applicants' claimed invention. Specifically, Brownawell '799 does not teach controlling the size of either the particles or the resulting interstices, which provides a specific contact surface between the particles and the oil such that selected amounts of the beneficial additives can be disposed within the oil, while providing a selected flow rate of oil through the particles.

Absent in Brownawell '799 is any teaching or suggestion that would have motivated those skilled in the art to choose Applicants' specific claimed particle size range or particular resulting interstitial spacing. The PTO states that:

it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ particles having the recited diameter in the reference system, in order to facilitate handling of the treatment material in

this reference system.  
(Office Action of 8/25/2006, page 2).

Applicants respectfully disagree with this conclusion and submit that it is contrary to well established patent laws.

It is respectfully submitted that this statement says **nothing** about the selection of particles within a relatively narrow range of 0.1-6 mil. The PTO's position appears to be more analogous to an inherency based anticipation argument rather a prima facie case of obviousness per MPEP 2143.

Unlike anticipation, MPEP 2143 requires a *suggestion or teaching*. Per the requirements of MPEP 2143, the '799 reference cannot teach or suggest all of the required limitations of claim 1 without a suggestion to select particles having Applicants' narrowly selected average particle diameter size.

The PTO fails to provide any teachings in the prior art that demonstrate this element. The ultimate legal conclusion of obviousness must be based on facts or records, not on the Examiner's unsupported allegation that a particular structural modification is "well known" and thus obvious. Subjective opinions are of little weight against contrary evidence. *In re Wogner et al.* 152 U.S.P.Q. 552 (C.C.P.A. 1967).

The PTO has responded to Applicants' previous argument with the following:

Applicants argue that "Brownawell '799 is silent as to Applicant's claimed filter using particles of a particular average diameter." It is pointed out, however, that the particles in the chemically active filter member of this reference device must inherently have some average diameter. One of ordinary skill in the oil treatment art would readily recognize that particles having an average diameter significantly below 0.1 millimeters could cause handling problems in the reference device, since powders are more difficult to handle than are larger granules. One of ordinary skill in the oil treatment art would also readily recognize that particles having an average diameter significantly above 6 millimeters could cause problems in the reference device, *since the interstitial space between these particles could be too great to produce adequate contact between the chemically active media and the oil undergoing treatment*. Accordingly, this skilled artisan would have been motivated to select particles having an average diameter within the recited range, in order to avoid the above noted problems.

(Office Action of 8/25/2006, page 5, emphasis added)

Applicants greatly appreciate the PTO's detailed remarks but must respectfully note that these statements could not have been made in the absence of Applicants' teachings. For example, the PTO provides no support for its conclusion that "*the interstitial space between these particles could be too great to produce adequate contact between the chemically active media and the oil undergoing treatment.*" Where, other than Applicants' teachings, does one of skill in the art find any such teaching? Why, other than Applicants' teachings, would one of skill in the art reach such a conclusion? Indeed, where does the prior art mention or suggest the importance of interstitial spaces, let alone particularly sized interstitial spaces resulting from the selection of a particularly sized particles?

It is respectfully submitted that the PTO's statement that "particles ...must inherently have some average diameter" says **nothing** about the selection of particles within a relatively narrow range of 0.1-6 millimeters. Again, the PTO's position appears to be more analogous to an inherency based anticipation argument rather a prima facie case of obviousness per MPEP 2143.

The courts have repeatedly made the distinction that ...[t]hat which may be inherent is not necessarily known. Obviousness cannot be predicated on what is unknown. *In re Spormann*, 363 F.2d 444, 448, 150 U.S.P.Q. 449, 452 (C.C.P.A. 1966). ....[t]hat which is inherent in the prior art, if not known at the time of the invention, cannot form a proper basis for rejecting the claimed invention as obvious under § 103. See *In re Shetty*, 566 F.2d 81, 86, 195 U.S.P.Q. 753, 756-57 (C.C.P.A. 1977).

Applicants agree that the general laws of physical science dictate that the particles disclosed in Brownawell '799 possess diameter and shape. However, in this case, Applicants' have selected a particular structural characteristic, i.e., interstitial spaces of a particular size as resulting from the selection of particles of a beneficial additive of a particular average diameter, that is simply ignored in the Brownawell '799 references.

This fact pattern is thus governed by the Federal Circuit's holding in *In re O'Farrell*. Where the prior art gives no indication of which parameters are critical and no direction as to which of many possible choices is likely to be successful, the fact that the claimed

combination falls within the scope of possible combinations taught therein does not render it unpatentably obvious. *In re O'Farrell*, 7 U.S.P.Q 1673 (Fed. Cir. 1988).

Moreover, where the prior art has not recognized the "result-effective" capability of a particular invention parameter, no expectation would exist that optimizing the parameter would successfully yield the desired improvement. A particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation. *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977)

Antonie claimed a waste water treatment that included a tank having continuously rotating semi-immersed contactors (discs). Antonie discovered that treatment capacity was maximized when the ratio of tank volume to contactor area was 0.12 gals./sq. ft.

The single reference cited by the PTO disclosed the same basic structure as Antonie but failed to disclose or recognize a tank volume to contactor ratio of 0.12, or suggest any reason to calculate the tank volume to contactor area ratio, let alone a specific magnitude. Despite the lack of disclosure, the PTO still considered Antonie's apparatus having the claimed ratio an obvious modification of the prior art apparatus. According to the PTO, optimizing efficiency by varying a parameter such as magnitude represented routine, mechanical experimentation.

In contrast, the CCPA stated that an evaluation of the obviousness of the invention as a whole requires looking "not only to the subject matter which is literally recited in the claim in question (the ratio value) but also to those properties of the subject matter which are inherent in the subject matter *and* are disclosed in the specification." *In re Antonie*, 559 F.2d at 619, 195 U.S.P.Q. at 8 (citation omitted). "In this case, the invention as a whole is the ratio value of 0.12 *and* its inherent and disclosed property." *Id.*

Antonie's discovery of the relationship between the result (maximized treatment capacity) and the specific design parameter (ratio value) was "unsuggested recognition" of a result-effective variable and the touchstone of nonobviousness in this case. Acknowledging that it would ordinarily consider mere optimization of a variable in a known process *prima*

*facie* obvious, the court noted two exceptions to this rule: 1) cases where optimizing a known result-effective variable produced unexpectedly good results and 2) the present case, where the art did not recognize that the parameter optimized was a result-effective variable. *Id.* at 620, 195 U.S.P.Q. at 8-9.

In the instant case, Applicants' particular selection of particles having a diameter of 0.1 to 6 millimeters in order to produce particularly sized interstitial spaces is an 'unsuggested recognition' of a result effective variable that the prior art, i.e., Brownawell, does not recognize as a result effective variable.

In contrast, Applicants' application discloses particles having a diameter of 0.1 -6 millimeters to produce interstitial spaces specifically chosen and engineered to screen out most complexes which result from a reaction between combustion acids in the filtered oil and beneficial additive of the particles of without substantially reducing flow rate. (Applicant's Specification, page 8) In this manner, Applicants' invention, as a whole, recognizes and discloses that the selection of the particularly sized particles and the resulting particularly sized interstitial spaces are result-effective variables.

Most importantly, Brownawell '799 is completely silent as to the importance of these factors. Nothing in Brownawell '799 disclosure suggests particle diameter, nor discloses any relative property, inherent or otherwise, much less recognizes particle diameter and/or interstitial spacing as a result-effective variable to achieve the present invention. As nothing in Brownawell '799 suggests or gives any reason to employ particles having the dimensions and/or diameter as claimed in the present application, one skilled in the art would not be motivated or have any reasonable expectation of success to achieve the claimed invention by modifying the teachings of Brownawell '799.

And, as previously discussed, unlike anticipation, MPEP 2143 requires a suggestion or teaching. Per the requirements of MPEP 2143, the '799 reference cannot teach or suggest all of the required limitations of claim 1 without a suggestion to select particles having Applicants' narrowly selected average particle diameter size.

Moreover, the PTO's italicized statement in the Office Action of 8/25/2006, could not have been made without the hindsight benefit of Applicants' teachings as to the importance of

having particularly sized interstitial spaces between the particles comprising the beneficial additive, wherein the particularly sized interstitial spaces result from the selection of particles having a specified average diameter. The CAFC has stated “to imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher. *W.L. Gore & Assocs., Inc.*, v. *Carlock*, 220 U.S.P.Q. 303, 312-313. (Fed. Cir. 1983).

Indeed, the PTO’s statements as to the ‘obviousness’ of Applicants’ required average particle diameter range ignore the express teachings of other Brownawell references. For example, U.S. Patent 5,252,081 to Brownawell teaches that active filter media suitable for use in making a solid hollow composite have sizes in the range of from 0.1 to 3000 *micrometers*. This translates to .0003 to 118 millimeters. It is noted that the wide ranges of particle size used in the prior art will not create interstitial spacing in that smaller particles will inherently fill the interstitial spaces created by the larger particles. It can further be appreciated that the PTO’s speculation about handling concerns ignores the prior art’s use of many, many particles that are less than 0.1 millimeters.

Indeed, those of skill in the art have often focused on providing greater surface area in order to provide greater surface contact. It will be appreciated that decreasing particle size leads to increasing surface area for contact with the incoming oil to be treated. Many of skill in the art would suggest that it would be obvious to select smaller particles to obtain greater surface area. Thus, the PTO’s suggestion ignores the other problems and concerns of those of skill in the art and fails to provide a real motivation to do what Applicants have done.

Likewise, the PTO suggests that it is obvious that particles greater than 6 millimeter “ would provide too large of interstitial spaces. However, nothing in the prior art provides this teaching. Rather, Brownawell ‘799 reference teaches the use of the 2-stage filter is the only thing necessary to control oil flow through ZnO particles (i.e., see Example 2 of Brownawell ‘799). Applicants respectfully request that the PTO provide support, in the prior art, for their contention that the such selection is obvious.

In the absence of Applicants’ teachings, one of skill in the art would have no



motivation to select particles having the narrowly selected average diameter of from 0.1 to 6 millimeters in order to obtain the particularly required interstitial spaces therebetween.

And, as previously discussed, unlike anticipation, MPEP 2143 requires a *suggestion or teaching*. Per the requirements of MPEP 2143, the '799 reference cannot teach or suggest all of the required limitations of claim 1 without a suggestion to select particles having Applicants' narrowly selected average particle diameter size.

It is respectfully also submitted that the PTO's suggested motivation for Applicants' required interstitial spaces and average particle diameters in Applicants' claim 1 is nothing more than an application of the prohibited 'obvious to try' standard. "Obvious to try" is not a valid test of patentability.

As indicated by the '081 reference, there is a wide universe of particle sizes that could be utilized in an oil filter. It is pure speculation on the PTO's part that one of ordinary skill in the art would find it obvious to try and select Applicants' particular limited average diameter sizes in order to obtain Applicant's required interstitial spaces. The ultimate legal conclusion of obviousness must be based on facts or records, not on the Examiner's unsupported allegation that a particular structural modification is "well known" and thus obvious. *In re Wagner et al.* 152 U.S.P.Q. 552 (C.C.P.A. 1967).

#### Claim 18

Independent claim 18 adds additional limitations to independent claim 1, which are not taught in the prior art. Specifically, claim 18 teaches an additional limitation that the individual particles have a high (90-97 percent concentration) of beneficial additive in the particles. As discussed in Applicants' Specification, Applicants use a solvent based method for forming particles which allows high concentration of particles and low concentrations of binders (paragraph 53 of Applicants' Specification).

However, the PTO relies on a reference that does teach producing particles by the specific method of taught by Applicants specification and therefore would not have the high concentration of beneficial additive particles.

The PTO continues to hold that "it would have been obvious to one of ordinary skill in

the art at the time the invention was made to employ the recited amount of beneficial additive in the reference particles, in order to ensure that a sufficient amount of additive is present in these particles to adequately rejuvenate the oil under going treatment.”

Further, the PTO states “Applicants should note that the particles in the chemically active filter member of Brownawell ‘799 must inherently have some percentage of beneficial additive; and that one of ordinary skill in the oil treatment art would readily recognize that particles having a greater concentration of beneficial additive would be more efficient in treating oil than would particles having a lesser concentration of additive (See Office Action of 8/25/2006, page 5). However, as noted above with respect to the PTO’s argument of ‘some diameter’, a rational to justify a modification does not take the place of the suggestion in the prior art to make such a modification. There must be a teaching in the *prior art* for the proposed combination or modification to be proper. *In re Newell*, 13 U.S.P.Q.2d 1248 (Fed Cir. 1989), *emphasis added*. Even if the teachings of a primary reference could be modified to arrive at the claimed subject matter, the modification is not obvious unless the prior art also suggests the *desirability* of such a modification. *In re Laskowski*, 10 U.S.P.Q.2d 1397, 1398 (Fed Cir. 1989).

Applicants respectfully submit that since Brownawell ‘799 does not teach Applicants’ specific low solvent process for producing individual particles having a high concentrations of additives, and one of ordinary skill in the art would not recognize the advantage of having high particle concentrations. Therefore, one of ordinary skill in the art would not read Brownawell to teach the required 90-97 percent concentration.

To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 180 USPQ 580 (C.C.P.A. 1974); MPEP 1243.03. The required concentration of beneficial additive particles is not taught by the prior art. Thus, Applicants respectfully requests removal of the rejection to claim 18.

Thus, reconsideration and removal of the rejection is respectfully requested as to independent claims 1, and 18, and well as to all claims depending therefrom.

2. Rejection of claims 3, 13-15 and 17 under 35 U.S.C. §103(a) as being unpatentable over Brownawell et al., U.S. 5,069,799, and further in view of DeJovine, U.S. 4,144,166, hereafter "DeJovine" or "166".

The PTO states:

Brownawell '799 as modified above discloses the claimed invention with the exception of the recited polymeric binder (claim 3), and the presence of an antioxidant as the beneficial agent (claims 13-15 and 17). DeJovine discloses a similar oil filter and teaches supporting an oil additive material such as calcium carbonate or calcium hydroxide (see col. 11, lines 57-58) with a polymeric material of the type recited (see col. 3, line 20). *It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the polyolefin of DeJovine as the "polymer matrix" of Brownawell '799 (see col. 2, line 2) since this polyolefin is capable of supporting the calcium carbonate or calcium hydroxide of this primary reference (see col. 2, lines 12-13) in the required manner. Also, this secondary reference teaches that antioxidants of the type recited can be employed as additives for lubricating oil (see col. 11, lines 41-42 and 48-52); and it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the antioxidants disclosed by DeJovine into the chemically active filter member of Brownawell '799, in order to inhibit oxidation of the oil undergoing treatment in this modified primary reference system.*

(Office Action of 8/25/2006, page 3, emphasis added)

### Claim 3

Claim 3 continues to stand rejected on the grounds that it "would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the polyolefin of DeJovine as the 'polymer matrix' of Brownawell '799 since this polyolefin is capable of supporting the calcium carbonate or calcium hydroxide of this primary reference in the required manner". (Office Action of 3/2/05, page 3, citations omitted.)

Applicants appreciate the detailed basis of rejection but must respectfully disagree. Further, Applicants submit that claim 3 depends on and incorporates all the limitation of claim 1. Therefore, claim 3 is allowable for due to the reasons stated in Section 1, herein

incorporated by reference.

The secondary reference DeJovine is relied upon for its disclosure of a relatively insoluble polymer support media. DeJovine discloses a solid thermoplastic polymer having a controlled rate of dissolution in oil, the polymer containing particles that are intentionally released into the oil as a function of the controlled rate of dissolution of the polymer. The PTO appears to rely on DeJovine's disclosure that some polymers having a controlled rate of dissolution into oil are 'relatively oil-insoluble'.

With respect to dependent claim 3 and thus independent claim 1, the PTO states that it would have been obvious to one of ordinary skill in the art to combine the chemically active filter media of Brownawell with the relatively oil-insoluble polymer support material of DeJovine. The PTO deems this modification to be obviousness in view of the disclosure by Brownawell '799 that the chemically active filter media may be supported on a substrate that is a polymer matrix. (*Office Action of 3/2/05, pg. 3, citations omitted.*)

However, the discussion in Brownawell '799 in col. 2, lines 1-7 as to the support of the chemically active filter media on a substrate in no way supports the PTO's stated basis of rejection. Rather, the disclosure at col. 2, lines 1-7 of Brownawell '799 merely indicates that the chemically active filter media may be supported on *substrates* such as alumina, activated clay, cellulose, cement binder, silica-alumina, activated carbon and the like. Brownawell continues on to state that such *substrates* may be in the form of pellets, cylinders, or spheres. Nothing in Brownawell '799 indicates that individual particles that comprise *both* a chemically active material and a thermoplastic could be used in the housing 4 of Brownawell's Figure 1.

MPEP 2143 requires that the motivation to do what Applicants have done come from the cited references. Even if the teachings of a primary reference could be modified to arrive at the claimed subject matter, the modification is not obvious unless the prior art also suggests the *desirability* of such a modification. *In re Laskowski*, 10 U.S.P.Q.2d 1397, 1398 (Fed Cir. 1989). There must be a teaching in the prior art for the proposed combination or modification to be proper. *In re Newell*, 13 U.S.P.Q.2d 1248 (Fed Cir. 1989). No support or evidence has been offered to show that the proposed rationale comes from the cited references.

Also, the teachings of DeJovine fail to rectify the above noted deficiencies of

Brownawell '799 in regards to the elements of amended independent claim 1 as discussed above in Section 2 and hereby incorporated by reference.

Moreover, "employ[ing] the polyolefin of DeJovine as the "polymer matrix" of Brownawell" would **not** result in Applicants' invention of claims 1 and 3. The entire premise of DeJovine requires particles embedded in a slowly dissolving resin. DeJovine thus precludes interstitial spaces. Indeed, DeJovine's basic principle of operation eliminates the presence of interstitial spaces. (See DeJovine '166, col. 2, lines 46-57). Thus, it is not clear what the combination of Brownawell '799 and DeJovine provides, i.e., pellets or a solid mass or a colloidal suspension.

It is thus inappropriate to use DeJovine in the instant claim. If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 123 U.S.P.Q. 349 (CCPA 1959); MPEP 2143.01.

Moreover, one of skill in the art would not select the polymer of DeJovine as the 'polymer matrix' of Brownawell '799 as suggested by the PTO. Applicants' claim 1 clearly requires that the beneficial additive be retained in the oil filter. As clearly indicated above, the polymers of DeJovine are intended to dissolve and release the additive into the oil stream. This contrary to the intended operation of Applicants' claimed invention. Thus, the combination of Brownawell and DeJovine produces an inoperative embodiment that is outside the scope of Applicants claimed invention set forth in dependent claim 3. Indeed, such a combination would result in interstitial spaces of an ever-increasing size that would fail to screen out complexes that result from the action of the beneficial additive. One of skill in the art would thus not be motivated to do what the PTO has suggested.

Accordingly, it is respectfully submitted that DeJovine cannot rectify Brownawell '799's failure to disclose or suggest all of the elements of the inventions of Applicants' claim 1. Because claim 1 is nonobvious over the cited combination, it is submitted that claim 3 is likewise nonobvious.

Reconsideration and removal of the rejection is respectfully requested as to dependent claim 3 for the reasons set forth above.

### Claims 7 and 13

Claims 7 and 13 respectively disclose an oil filter and a supplemental cartridge for use with an oil filter. The inventions of claims 7 and 13 are similar to independent claim 1 in that they likewise require the use of a chemically active filter having a plurality of particles consisting essentially of a beneficial additive, wherein the particles have an average diameter of from 0.1 to 6 millimeters. Claim 13 as amended also requires that the beneficial additive consist essentially of at least one of an antioxidant or a mixture of a basic salt and an antioxidant.

The PTO has failed to establish a prima facie case of obviousness by failing to demonstrate where the structural limitations of claims 7 and 13 are taught by the prior art. To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 180 USPQ 580 (C.C.P.A. 1974); MPEP 1243.03. However, this required showing is absent in the PTO's Office Action of (8/25/2006) along with previous office actions.

In fact, the combination of Brownawell and DeJovine fails to disclose the particular structural aspects of independent claims 7 and 13. For example, claims 7 and 13 requires a tapping plate and a mechanically active filter that is "spaced away from said tapping plate". However, Brownawell '799 does not teach or suggest having a tapping plate and a mechanically active filter that is "spaced away from said tapping plate". In particular, Brownawell '799 only seems to teach filter elements being disposed adjacent to tapping plates (see, e.g., Figure 2 and column 4, line 50 -- column 6 lines 10). Further, these structural limitations are absent in DeJovine. The only teachings of DeJovine is of a filter element 4 which does not appear to be spaced away from a tapping plate (See Figures 1 and 2 of DeJovine '166).

Further, it would **not** have "been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the antioxidants disclosed by DeJovine into the chemically active filter member of Brownawell '799, in order to inhibit oxidation of the oil undergoing treatment". The entire premise of DeJovine requires particles embedded in a slowly dissolving resin. DeJovine, thus, precludes interstitial spaces. Indeed, DeJovine's

basic principle of operation eliminates the presence of interstitial spaces. (See DeJovine '166, col. 2, lines 46-57). In contrast, Applicants claimed invention has interstitial spaces so that the additives such as antioxidants are added to oil when the oil is in the interstitial spaces. A combination of Brownawell '799 and DeJovine, therefore, does **not** teach or suggest Applicants' invention of claim 13.

Taken as a whole, the cited combinations are insufficient to provide a prima facie case of obviousness as to the inventions of Applicants' independent claims 7, and 13. More particularly, the cited combination fails to disclose or suggest all of the required elements of these claims.

Accordingly, it is respectfully submitted that independent claims 3, 7, and 13 are nonobvious over cited combination as the cited combination fails to disclose or suggest all of the required elements of these claims.

3. **Rejection of claim 4 under 35 U.S.C. §103(a) as being unpatentable over Brownawell et al., U.S. 5,069,799, and further in view of Bilski et al., U.S. 5,725,031, hereafter "Bilski" or "'031".**

Sections 1 and 2 above are hereby incorporated by reference.

Claim 4 is dependent upon amended independent claim 1.

It is respectfully submitted that Bilski cannot rectify the above noted deficiencies of Brownawell '799.

In addition, Bilski discloses a delivery system for PTFE. As noted in col 2, lines 48-61, the PTFE colloidal suspension is displaced by the incoming oil at first engine start up. Thus, the one time delivery system of Bilski fails to satisfy the basis requirements of Applicants' claimed oil filter, i.e., that the beneficial additive be released as oil *circulates* through the filter.

Moreover, Bilski teaches that the small particle size is crucial to having the PTFE completely displaced by the incoming oil. One of skill in the art would thus expect that small particles sizes would teach away from the retention of particles in a chemically active filter member as is required in Applicants' amended independent claim 1.

Accordingly, it is respectfully submitted that Bilski cannot rectify Brownawell '799's

failure to disclose or suggest all of the elements of the inventions of Applicants' claim 1. Because claim 1 is nonobvious over the cited combination, it is submitted that claim 4 is likewise nonobvious.

The PTO disregards these arguments on the basis that *Bilski* is only relied upon for the location of the chemical adding element radially and coaxially inside a mechanically active filter element.

However, the PTO may not ignore those portions of a reference that lead one of skill in the art away from a claimed invention. The Federal Circuit has specifically prohibited such actions. A reference that leads one of ordinary skill in the art away from the claimed invention cannot render it unpatentably obvious. *Dow Chem. Co. v. American Cyanamid Co.*, 2 U.S.P.Q.2d 1350 (Fed. Cir. 1987).

For example, the Federal Circuit has clearly stated that "each prior art reference must be evaluated as an entirety, and ...all of the prior art must be evaluated as a whole". *In re Frisch*, 23 U.S.P.Q.2d 1780, 1782 (Fed. Cir. 1992). And particularly on point, the CCPA had earlier said "[t]he test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art." *In re Keller*, 108 U.S.P.Q. 871, 881 (C.C.P.A. 1981).

Accordingly, the PTO may not ignore those portions of a reference that lead one of skill in the art away from a claimed invention.

Reconsideration and removal of the rejection is respectfully requested as to dependent claim 4 for the reasons set forth above.

**4. Rejection of claim 16 under 35 U.S.C. §103(a) as being unpatentable over Brownawell et al., U.S. 5,069,799, and DeJovine, U.S. 4,144,166, and further in view of Robers et al., U.S. 5,544,699, hereafter "Robers" or "'699".**

Sections 1 and 2 above are hereby incorporated by reference.

Claim 16 is dependent upon amended independent claim 13 and incorporates all of the limitations thereof.



It is respectfully submitted that Robers fails to rectify the above noted deficiencies of Brownawell '799's in regards to Applicants' claim 13. In particular, Robers fails to disclose or suggest all of the elements of the inventions of Applicants' claim 13 that Brownawell fails to disclose as noted above Section 2.

Because claim 13 is nonobvious over the cited combination, it is submitted that claim 16 is likewise nonobvious.

Reconsideration and removal of the rejection is respectfully requested as to dependent claim 16 for the reasons set forth above.

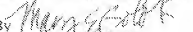
CONCLUSION

Applicants respectfully submit that the Application and pending claims are patentable in view of the foregoing amendments and/or remarks. A Notice of Allowance is respectfully requested. As always, the Examiner is encouraged to contact the Undersigned by telephone if direct conversation would be helpful.

If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 06-1130.

Respectfully submitted,

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By 

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